

AMENDMENTS TO THE CLAIMS

1.-3. (Canceled)

4. (Currently Amended) A wireless communication function equipped sensor comprising:

a sensor unit comprising at least one physical quantity detection device, which detects a physical quantity of a detection object;

an electric power generator;

an electric power charging device which is charged by electric power generated by said electric power generator;

a processing device which processes detection results from said at least one physical quantity detection device;

a wireless transmitting device which transmits said detection results to a wireless communication device by wireless signals;

a wireless receiving device which receives wireless signals from said wireless communication device; and

a power control device which supplies the electric power charged by said electric power charging device to said load devices, wherein said load devices are activated when the electric power charged by said electric power charging device reaches a level sufficient to activate said load devices,

wherein the sensor unit, processing device, wireless transmitting device and wireless receiving device, are activated intermittently using electric power charged by said electric power charging device, said sensor unit, processing device, wireless transmitting device and receiving device being load devices of the electric power charging device, and

wherein said wireless receiving device is activated after the transmitting device is activated ~~according to claim 1, further comprising a power control device which supplies the electric power charged by said electric power charging device to said load devices, wherein said load devices are activated when the electric power charged~~

~~by said electric power charging device reaches a level sufficient to activate said load devices.~~

5. (Currently Amended) A wireless communication function equipped sensor comprising:

a sensor unit comprising at least one physical quantity detection device, which detects a physical quantity of a detection object;

an electric power generator;

an electric power charging device which is charged by electric power generated by said electric power generator;

a processing device which processes detection results from said at least one physical quantity detection device;

a wireless transmitting device which transmits said detection results to a wireless communication device by wireless signals;

a wireless receiving device which receives wireless signals from said wireless communication device; and

a power control device which supplies sequentially the electric power charged by said electric power charging device to said load devices, when the electric power charged by said electric power charging device reaches a level sufficient to activate said load devices,

wherein the sensor unit, processing device, wireless transmitting device and wireless receiving device, are activated intermittently using electric power charged by said electric power charging device, said sensor unit, processing device, wireless transmitting device and receiving device being load devices of the electric power charging device, and

wherein said wireless receiving device is activated after the transmitting device is activated according to claim 1, further comprising a power control device which supplies sequentially the electric power charged by said electric power charging

~~device to said load devices, when the electric power charged by said electric power charging device reaches a level sufficient to activate said load devices.~~

6. (Canceled)

7. (Currently Amended) A wireless communication function equipped sensor comprising:

a sensor unit comprising at least one physical quantity detection device, which detects a physical quantity of a detection object;

an electric power generator;

an electric power charging device which is charged by electric power generated by said electric power generator;

a processing device which processes detection results from said at least one physical quantity detection device;

a wireless transmitting device which transmits said detection results to a wireless communication device by wireless signals;

a wireless receiving device which receives wireless signals from said wireless communication device,

wherein the sensor unit, processing device, wireless transmitting device and wireless receiving device, are activated intermittently using electric power charged by said electric power charging device, said sensor unit, processing device, wireless transmitting device and receiving device being load devices of the electric power charging device, and

wherein said wireless receiving device is activated after the transmitting device is activated according to claim 1,

wherein said processing device calculates an amount of data receivable by said wireless receiving device or an amount of time allowable for receiving the wireless signal by said wireless receiving device based on an electric power level when

electric power sufficient to activate said load devices is charged by said electric power charging device, and adds the calculated amounts to said results.

8.-9. (Canceled)

10. (Currently Amended) A wireless communication function equipped sensor comprising:

a sensor unit comprising at least one physical quantity detection device,
which detects a physical quantity of a detection object;

an electric power generator;

an electric power charging device which is charged by electric power
generated by said electric power generator;

a processing device which processes detection results from said at least
one physical quantity detection device;

a wireless transmitting device which transmits said detection results to a
wireless communication device by wireless signals,

a wireless receiving device which receives wireless signals from said
wireless communication device;

wherein the sensor unit, processing device, wireless transmitting device
and wireless receiving device, are activated intermittently using electric power charged
by said electric power charging device, said sensor unit, processing device, wireless
transmitting device and receiving device being load devices of the electric power
charging device, and

wherein said wireless receiving device is activated after the transmitting
device is activated; according to claim 1,

wherein said electric power generator starts generating electricity in response to an output of an environment generating device for applying generating conditions predicted as the environment during generation of electricity.

11. (Currently Amended) A wireless communication function equipped sensor comprising:

a sensor unit comprising at least one physical quantity detection device, which detects a physical quantity of a detection object;

an electric power generator;

an electric power charging device which is charged by electric power generated by said electric power generator;

a processing device which processes detection results from said at least one physical quantity detection device;

a wireless transmitting device which transmits said detection results to a wireless communication device by wireless signals;

a wireless receiving device which receives wireless signals from said wireless communication device;

wherein the sensor unit, processing device, wireless transmitting device and wireless receiving device, are activated intermittently using electric power charged by said electric power charging device, said sensor unit, processing device, wireless transmitting device and receiving device being load devices of the electric power charging device, and

wherein said wireless receiving device is activated after the transmitting device is activated; according to claim 1,

wherein said electric power generator starts generating electricity in response to an output of an environment generating device for outputting a sound wave or an ultrasonic wave with a frequency identical to a frequency of vibration during generation of electricity.

12. (Canceled)

13. (Currently Amended) A wireless communication function equipped sensor comprising:

a sensor unit comprising at least one physical quantity detection device,
which detects a physical quantity of a detection object;

an electric power generator;

an electric power charging device which is charged by electric power
generated by said electric power generator;

a processing device which processes detection results from said at least
one physical quantity detection device;

a wireless transmitting device which transmits said detection results to a
wireless communication device by wireless signals,

a wireless receiving device which receives wireless signals from said
wireless communication device;

wherein the sensor unit, processing device, wireless transmitting device
and wireless receiving device, are activated intermittently using electric power charged
by said electric power charging device, said sensor unit, processing device, wireless
transmitting device and receiving device being load devices of the electric power
charging device; and

wherein said wireless receiving device is activated after the transmitting
device is activated; according to claim 1,

wherein said wireless transmitting device transmits wireless signals to said
wireless communication device by a communications method different from that of said
wireless receiving device.

14. (Currently Amended) A wireless communication function equipped
sensor comprising:

a sensor unit comprising at least one physical quantity detection device,
which detects a physical quantity of a detection object;

an electric power generator;

an electric power charging device which is charged by electric power
generated by said electric power generator;

a processing device which processes detection results from said at least one physical quantity detection device;

a wireless transmitting device which transmits said detection results to a wireless communication device by wireless signals;

a wireless receiving device which receives wireless signals from said wireless communication device;

wherein the sensor unit, processing device, wireless transmitting device and wireless receiving device, are activated intermittently using electric power charged by said electric power charging device, said sensor unit, processing device, wireless transmitting device and receiving device being load devices of the electric power charging device, and

wherein said wireless receiving device is activated after the transmitting device is activated;~~according to claim 1,~~

wherein said wireless transmitting device transmits wireless signals to said wireless communication device by the UWB communications method and, said wireless receiving device receives wireless signals from said wireless communication device using any of FM, AM or infrared communications methods.

15. (Currently Amended) A wireless communication function equipped sensor comprising:

a sensor unit comprising at least one physical quantity detection device, which detects a physical quantity of a detection object;

an electric power generator;

an electric power charging device which is charged by electric power generated by said electric power generator;

a processing device which processes detection results from said at least one physical quantity detection device;

a wireless transmitting device which transmits said detection results to a wireless communication device by wireless signals;

a wireless receiving device which receives wireless signals from said wireless communication device; and

a wireless signal transmitting/receiving device for transmitting and receiving wireless signals to and from said wireless communication function equipped sensor, and said wireless signal transmitting/receiving device transmits wireless signals to said wireless communication function equipped sensor immediately after receiving wireless signals from said wireless communication function equipped sensor;

wherein the sensor unit, processing device, wireless transmitting device and wireless receiving device, are activated intermittently using electric power charged by said electric power charging device, said sensor unit, processing device, wireless transmitting device and receiving device being load devices of the electric power charging device, and

wherein said wireless receiving device is activated after the transmitting device is activated A wireless host as a communication destination for a of wireless communication function equipped sensor according to claim 1,

~~comprising a wireless signal transmitting/receiving device for transmitting and receiving wireless signals to and from said wireless communication function equipped sensor, and said wireless signal transmitting/receiving device transmits wireless signals to said wireless communication function equipped sensor immediately after receiving wireless signals from said wireless communication function equipped sensor.~~

16. (Previously Presented) A wireless host as the communication destination for said wireless communication function equipped sensor according to claim 15, wherein said wireless signal transmitting/receiving device divides data of signals to be sent and transmits said signals when a data quantity of the transmitting signals to be sent to said wireless communication function equipped sensor is larger than a data quantity of wireless signals received from said wireless communication function equipped sensor.

17. (Previously Presented) A wireless host as the communication destination for said wireless communication function equipped sensor according to claim 15, wherein said wireless signal transmitting/receiving device analyzes the wireless signals received from said wireless communication function equipped sensor and determines a data quantity of the transmitting signal to be sent at one time to said wireless communication function equipped sensor.